University...

Dissertation...

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Title...

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Contents

1 Introduction

Autonomous cars are currently a topic of great interest. Around the world the biggest private companies or government's initiatives are developing self-driving vehicles (uber, google, britol car citations), competing for new emerging market. Each company focuses efforts in different direction. The companies are either trying to develope an all-round car that could perform in both city and on highways or restrict the usage to particular types of roads (tesla). Or anyhing in between. The most significant commercial initiatives include Google driverless car, Tesla, Uber (). Goverment founded initiatives include Venturer and ...

- Background of the problem, context of the research, reasons why the study was carried out, significance of the study

Many experts around the world are trying to predict how autonomous cars will influence our lives. One of the questions is how the traffic itself will change. Most of the experts agree that in the next decades we will observe gradual process of increasing the share of autonomous cars on our roads. In that time human-driven cars and self driving cars will have to successfully interact with each other. According to predictions the fully automated traffic will become reality only around year 2060 or year 2040 in more optimistic predictions and first commercial autonomous cars are already appearing on the roads (singapore, uber). Although there are numerous studies on many aspect of autonomous driving as well as on interactions between regular cars in all-human-traffic there is little research on interactions between these two types of vehicles and all it's consequences.

- A statement of the problem to be addressed

The focus of this research is to investigate how autonomous cars will influence traffic itself and how human and autonomous cars will interact with each other.

- clear and succinct statement of research questions, aims and objectives. How scope changed. Development calendar

2 Literature review

3 Research Methodology

Justify the structure of the project. Why the experiment was a key part. Why this was the best option rather than for example use data from some database?...hmmm

3.1 Experiment design and implementation

Justify all major design decisions. Plenty of them! All the actions undertaken to ensure most meaningful results

3.1.1 some other subsections

3.1.2 Data collection

How the experiment was eventually conducted

3.2 Software development

Justify all major design decisions

3.2.1 Simulation master design

3.2.2 Client's interface design

General description Simplifications and yet still accounting for most important parts of the car model

3.2.3 Car control

3.3 Communication between machines

From one point of view this a tightly coupled with software development but the way communication was established doesn't matter from the point of view of

software structure. Simply speaking the comms should only meet some requirements derived from the main piece of software and the details of implementation doesn't matter. This was a significant part of the job and its an achievement on its own.

3.4 Autonomous car model

Say why this is important from the point of view of results obtained. Again justify all design decisions

Figure 1: Percentage of older people in the UK 1985, 2010, 2035 [**?**]

Figure 2: Percentage of persons aged 65 and over EU-27, 1985, 2010, 2035 [**?**]